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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/813,656

03/20/2001

Robert W. Heath

42P15413

2873

8791

7590

08/22/2007

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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/813,656

Applicant(s)

HEATH ET AL.

Examiner

Curtis B. Odom

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 46-56, 74-78 and 80-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 46-56, 74-78 and 80-83 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-14, 46-56, 74-78, and 80-83 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-14, 46-56, 74-78, and 80-83 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, independent claims 1, 46, and 76 have been amended to recite the following limitation **“wherein the quality parameter is based on a ratio of signal statistics to error rate statistics.”** However, it is the understanding of the Examiner that the specification does not describe or disclose a quality parameter based on a ratio of signal statistics to error rate statistics.

The instant specification discloses the following (see page 13, lines 9-14): **“Next, the value of at least one quality parameter is determined, via step 620. Preferably, the quality**

parameter comprises one of the following: the signal-to-noise ratio, carrier-to-interference ratio, signal-to-interference plus noise ratio, bit error rate, packet error rate, frame error rate, or the cyclic redundancy check failure rate. The propagation channel of the wireless data transmission is then estimated, via step 625. Finally, the quality of the wireless data transmission is displayed, via step 630.” The specification further discloses the following (see page 15, lines 13-19): **“Preferably, the quality parameter determination block 530 comprises a statistical unit that analyzes the received streams of data and determines values for one or more quality parameters. The unit is preferably an averaging unit which averages signal/error rate statistics over time. For example, the signal statistics could relate to the signal-to-noise ratio, carrier-to-interference ratio, and the signal-to-interference plus noise ratio while the error rate statistics could relate to the bit error rate, the packet error rate, the frame error rate and the number of cyclic redundancy check failures.”** It is the understanding of the Examiner that “average signal/error rate statistics” refers to average signal rate statistics **or** average error rate statistics, and not a ratio between the statistics as recited in the claims. After reviewing the remainder of the specification, it is further the understanding of the Examiner that the device as disclosed in the specification determines and displays either average signal rate statistics **or** average error rate statistics, and not a ratio between the statistics as recited in the claims. In the instant specification, page 18, lines 4-9 states: **“Multiple output implementations include displaying the quality parameter value for each data substream, e.g. displaying the packet error rate of each data substream or displaying multiple average statistics, e.g. displaying the average bit error rate, packet error rate, and signal-to-interference plus noise ratio for all of the data substreams, or displaying a channel quality**

parameter and a data quality parameter for the data substreams.” Page 19, line 17-page 20, line 2 further discloses: **“Another contemplated embodiment utilizes two meters 890, 895. The first meter 890 corresponds to the quality of wireless data transmission based on channel parameters, e.g. channel condition number, delay spread, time/frequency variance, etc. The second meter 895 corresponds to the quality of the wireless data transmission based on the data parameters, e.g. bit error rate, packet error rate, frame error rate, etc. Accordingly, the end parameters, e.g. one set could correspond to the bit error rate, one set could correspond to the signal-to-noise ratio, etc.”**

The instant specification does not even disclose or describe displaying a quality parameter based on a ratio of signal statistics to error rate statistics (which is recited in the independent claims). Thus, it is the understanding of the Examiner that after reviewing the instant specification, that the specification does not describe or disclose a quality parameter based on a ratio of signal statistics to error rate statistics, rather the specification discloses determining a quality parameter based on average signal rate statistics **or** average error rate statistics.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

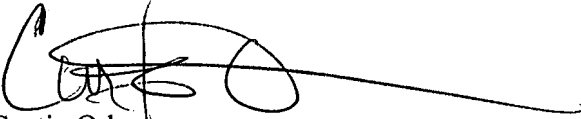
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Curtis Odom', with a long horizontal line extending to the right.

Curtis Odom
August 18, 2007